



Lion Elastomers LLC

1615 Main Street • P.O. Box 667 • Port Neches, TX 77651  
800 / 535-9960 • www.lionelastomers.com

## SBR 1789 Elastomer

## Product Data

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with 37.5 parts of low Polycyclic Aromatic Hydrocarbon RAE oil. SBR 1789 contains a higher level of bound styrene than SBR 1712. It was developed for tire applications.

### Unique Features

- ▶ Cold polymerized styrene-butadiene elastomer
- ▶ Higher bound styrene & RAE oil extended

### Applications

- ▶ Passenger & heavy-service treads
- ▶ Retread rubbers and bicycle tires

### Typical Properties

<u>Property</u>	<u>Test Method</u>	<u>Typical</u>
Bound Styrene, Weight % .....	ASTM D5775	39.0 – 41.0
Mooney viscosity, MML 1+4 (100°C) .....	ASTM D1646	47 - 57
Oil, Weight % .....	ASTM D5774	25.8 – 28.8
Oil Type .....	RAE	
Organic acid, Weight % .....	ASTM D5774	3.5 – 5.9
Soap, Weight % .....	ASTM D5774	0.5 Max.
Ash, Weight % .....	ASTM D5667	0.70 Max.
Volatile matter, Weight % .....	ASTM D5668	0.75 Max.
Emulsifier .....	—	Mixed acid
Coagulant .....	—	Acid or Salt Acid
Stabilizer .....	—	Staining
Specific gravity, g/cc (bale).....	—	0.95
Physical form*, lbs/bale .....	—	80.0 (36 kg)

**SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with an RAE oil, and containing a higher level of bound styrene. It is recommended for applications such as passenger and heavy-service treads, retread rubbers, and bicycle tires.**

\* This product is available in 80 lb rectangular bales individually wrapped in 1.5 mil, low melting point film and shipped in returnable aluminum OTD.

**Note:** Antioxidant is added to this polymer to provide protection during manufacture and storage. The end user's process may require additional antioxidant protection.

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### Rheometric Properties (MDR 2000 rheometer)

Test Method – ASTM D5289\*\*

<u>Property</u>	<u>Result</u>
M <sub>L</sub> lbf-in .....	1.2 – 3.2
dN-m .....	1.4 – 3.6
M <sub>H</sub> lbf-in .....	10.3 – 14.3
dN-m .....	11.7 – 16.2
t <sub>s</sub> 1, minutes .....	3.2 – 5.2
t' 50, minutes .....	7.2 – 11.2
t' 90, minutes .....	13.7 – 18.7

<u>Test Formula (ASTM D3185 2B)</u>	<u>Quantity, Parts by Mass</u>	<u>Material</u>
SBR 1789 oil-extended elastomer .....	137.50	
Zinc oxide .....	3.00	IRM 91A
Sulphur .....	1.75	IRM 031
Stearic acid .....	1.00	IRM 021
Oil furnace black .....	68.75	IRB #8
TBBS .....	1.38	IRM 003

\*\*160°C, 1°Arc

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